

WHAT IS CLAIMED IS:

1. An electronic circuit for changing a reference voltage value with a transforming circuit to supply it to control terminals of a plurality of current-generating active elements, establishing a conduction state of the plurality of the current-generating active elements, and selecting some of the plurality of current-generating active elements based on signals and generating a current having a current level corresponding to the signal by superposing currents passing through the current-generating active elements selected by the signal, among the plurality of current-generating active elements.

2. An electronic circuit, comprising:
a plurality of current-generating active elements;
a transforming circuit for generating an applied voltage which is applied to control terminals of the plurality of current-generating active elements by changing a reference voltage; and
selection transistors connected in series to each of the plurality of the current-generating active elements,
wherein a current having a current level corresponding to signals is generated by superposing the currents that pass through a selection transistor in which an ON-state is selected, among the selection transistors, based on the signal and the current-generating active elements connected in series to the selected selection transistor among the plurality of current-generating active elements.

3. The electronic circuit according to Claim 1, wherein the transforming circuit comprises a compensating transistor having a function for reducing the reference voltage value by a predetermined value or a function for adding a predetermined value to the reference voltage value.

4. The electronic circuit according to Claim 1, wherein each of the plurality of current-generating active elements comprises at least one transistor.

5. The electronic circuit according to Claim 1, wherein the plurality of current-generating active elements are connected in parallel to each other.

6. The electronic circuit according to Claim 1, wherein each of the plurality of current-generating active elements comprises one current generating transistor and the current generating transistors have different gain factors from each other.

7. The electronic circuit according to Claim 1, wherein at least one current-generating active element among the plurality of the current-generating active elements is connected in series to a unit transistor.

8. The electronic circuit according to Claim 7, wherein the compensating transistor is transistor having a characteristic almost equal to that of the unit transistor.
9. The electronic circuit according to Claim 6, wherein the current generating transistors and the compensating transistors are formed at positions adjacent to each other and have almost the same threshold voltage value.
10. The electronic circuit according to Claim 1, wherein the transforming circuit comprises initializing means for turning on the compensating transistor.
11. The electronic circuit according to Claim 1, wherein the transforming circuit comprises voltage-stabilizing means.
12. The electronic circuit according to Claim 11, wherein the voltage-stabilizing means comprises capacitors.
13. An electro-optical device, comprising:
 - a control circuit for outputting digital luminance gradation data;
 - a driving circuit for generating an analog driving signal based on the digital luminance gradation data; and
 - a pixel circuit for driving an electro-optical element based on the analog driving signal,
 wherein the driving circuit changes a reference voltage value with a converting circuit to supply it to control terminals of a plurality of current-generating active elements and to establish a conduction state in the plurality of current-generating active elements, and selects some of the plurality of current-generating active elements based on the digital luminance gradation data, and superposes currents that pass through an current-generating active elements selected by the digital luminance gradation data, among the plurality of current-generating active elements, to thereby generate an analog driving signal having a current level corresponding to the digital luminance gradation data.
14. An electro-optical device, comprising:
 - a control circuit for outputting digital luminance gradation data;
 - a driving circuit for generating an analog driving signal based on the digital luminance gradation data; and
 - a pixel circuit for driving a current driving element based on the analog driving signal,
 wherein the driving circuit comprises a plurality of current-generating active elements; a transforming circuit for generating an applied voltage which is applied to control terminals of the plurality of current-generating active elements by changing a reference

voltage; and selection transistors connected in series to each of the plurality of current-generating active elements, and

wherein a current having a current level corresponding to said digital luminance gradation data is generated by superposing the currents that pass through a selection transistor in which an ON-state is selected, among the selection transistors, based on the signal and the current-generating active elements connected in series to the selected selection transistor among the plurality of current-generating active elements.

15. The electro-optical device according to Claim 13, wherein the transforming circuit comprises a compensating transistor having a function for reducing the reference voltage value by a predetermined value or a function for adding a predetermined value to the reference voltage value.

16. The electro-optical device according to Claim 13, wherein each of the plurality of current-generating active elements comprises at least one transistor.

17. The electro-optical device according to Claim 13, wherein the plurality of current-generating active elements are connected in parallel to each other.

18. The electro-optical device according to Claim 13, wherein each of the plurality of the current-generating active elements comprises a current generating transistor, and the current generating transistors have different gain factors from each other.

19. The electro-optical device according to Claim 13, wherein at least one of the plurality of current-generating active elements is connected in series to a unit transistor.

20. The electro-optical device according to Claim 19, wherein the compensating transistor is a transistor having a characteristic almost equal to that of the unit transistor.

21. The electro-optical device according to Claim 18, wherein the current generating transistors and the compensating transistors are formed at positions adjacent to each other, and have almost the same threshold value voltage.

22. The electro-optical device according to Claim 13, wherein the transforming circuit comprises initializing means for turning on the compensating transistor.

23. The electro-optical device according to Claim 13, wherein the transforming circuit comprises voltage-stabilizing means.

24. The electro-optical device according to Claim 23, wherein the voltage-stabilizing means comprises capacitors.

25. The electro-optical device according to Claim 13, wherein the electro-optical element is an electroluminescent (EL) element.

26. The electro-optical device according to Claim 25, wherein the EL element comprises a light-emitting layer made up of organic materials.
27. An electronic apparatus packaged with electronic circuits according to Claim 1.
28. An electronic apparatus packaged with electro-optical devices according to Claim 13.